CLAIMS:

1. Pulse booster circuit, comprising:

- an input comprising first and second input terminals for receiving input voltage pulses having a first magnitude;
- an output comprising first and second output terminals;
- an electric energy storage buffer having an input capable of being charged by at least part of said input voltage pulses;
- pulse generator means having an input capable of being coupled to said energy storage buffer, the pulse generator means being designed to generate output voltage pulses having a second magnitude, using energy from the said energy storage buffer.

2. Pulse booster circuit according to claim 1, wherein said second magnitude is larger than said first magnitude.

3. Pulse booster circuit according to claim 1 or 2, further comprising:

- a first pulse transfer path extending between said first input terminal and said first output terminal;
- a second pulse transfer path extending between said second input terminal and said second output terminal;

wherein said electric energy storage buffer has an input capable of being coupled to at least one of said pulse transfer paths;

and wherein said pulse generator means has an output coupled to at least one of said pulse transfer paths.

4. Pulse booster circuit according to claim 3, wherein said electric energy storage buffer comprises a storage capacitor capable of being coupled between said two pulse transfer paths.

5. Pulse booster circuit according to claim 3 or 4, further comprising buffer charging means adapted to sense a voltage difference between said two pulse transfer paths

and to charge said energy storage buffer from said pulse transfer path in response to sensing said voltage difference exceeding a first predetermined threshold.

6. Pulse booster circuit according to claim 5, wherein said buffer charging means are designed to connect said energy storage buffer with at least one of said pulse transfer paths in response to sensing said voltage difference exceeding said first predetermined threshold.

7. Pulse booster circuit according to claim 5 or 6, wherein said buffer charging means comprise a first breakdown switch coupled between said energy storage buffer and at least one of said pulse transfer paths, said breakdown switch preferably comprising a sparkgap or SIDAC.

8. Pulse booster circuit according to any of claims 5-7, wherein said buffer charging means comprise rectifying means.

9. Pulse booster circuit according to any of the previous claims, further comprising buffer discharging means adapted to sense a voltage level of the energy storage buffer and to discharge said energy storage buffer at least partly into said input of said pulse generator means in response to sensing said voltage level exceeding a second predetermined threshold.

10. Pulse booster circuit according to claim 9, wherein said buffer discharging means are designed to connect said energy storage buffer with said pulse generator means in response to sensing said voltage level exceeding said second predetermined threshold.

11. Pulse booster circuit according to claim 9 or 10, wherein said buffer discharging means comprise a second breakdown switch coupled between said energy storage buffer and said pulse generator means, said breakdown switch preferably comprising a sparkgap or SIDAC.

12. Pulse booster circuit according to any of claims 9-11, wherein said second predetermined threshold is lower than said first predetermined threshold.

13. Pulse booster circuit according to any of the previous claims, wherein said pulse generator means comprises a transformer.

14. Pulse booster circuit according to any of the previous claims, wherein said pulse generator means has a first output coupled to said first pulse transfer path and a second output coupled to said second pulse transfer path.

15. Pulse booster circuit according to any of the previous claims 3-14, wherein said pulse generator means comprises a transformer having an input winding for coupling with said energy storage buffer and having at least one output winding incorporated in said first pulse transfer path or said second pulse transfer path.

16. Pulse booster circuit according to any of the previous claims, comprising:

- a series arrangement of a first breakdown switch and a storage capacitor, coupled between said two input terminals;
- a transformer having an input winding connected in series with a second breakdown switch, said series arrangement of second breakdown switch and transformer input winding being connected in parallel to said storage capacitor;

said transformer having a first output winding connected to said first output terminal.

17. Pulse booster circuit according to claim 16, wherein said transformer has a second output winding connected to said second output terminal.

18. Pulse booster circuit according to any of the previous claims,
wherein said pulse generator means has a first input coupled to the input of the booster circuit,
wherein said pulse generator means has a second input capable of being coupled to an output of the energy storage buffer,
and wherein said pulse generator means has an output coupled to the output of the booster circuit.

19. Driver system for a gas discharge lamp, comprising a lamp current and ignition pulses generating means and a pulse booster circuit according to any of the previous claims.

20. A lamp holder for a gas discharge lamp, comprising:

- a driver input for connecting to a lamp driver system;
- lamp connector terminals for electrical contact with a lamp received by said holder;
- and a pulse booster circuit according to any of the previous claims, accommodated within said holder, having its input connected to said driver input of said lamp holder and having its output connected to said lamp connector terminals of said lamp holder.